SECTION-BY-SECTION SUMMARY OF
THE SCIENCE AND MATHEMATICS EDUCATION FOR COMPETITIVENESS ACT

SEC. 1 SHORT TITLE

"Science and Mathematics Education for Competitiveness Act"

SEC. 2 ROBERT NOYCE TEACHER SCHOLARSHIP PROGRAM

Amends Section 10 of *The National Science Foundation Authorization Act of 2002*, which established the Robert Noyce Teacher Scholarship Program, to provide scholarships to students majoring in science, technology, mathematics, and engineering (STEM) fields who commit to teaching after graduation. Amends law to (1) increase the minimum scholarship to $10,000; (2) allow the Director of the National Science Foundation (NSF) to provide additional years of scholarship support to part-time students and caps the post-graduation service requirement at 4 years, and (3) extend stipend support for professionals in STEM fields to 16 months from one year. Authorizes appropriations for the program of $50,000,000 for fiscal year 2007, $70,000,000 for fiscal year 2008, and $90,000,000 for each of the fiscal years 2009 through 2011.

SEC. 3 SCIENCE AND MATHEMATICS TEACHER TRAINING PARTNERSHIPS

Amends Section 9 of *The National Science Foundation Authorization Act of 2002*, to establish a program at NSF to provide grants to science, mathematics, or engineering departments at institutions of higher education or to eligible nonprofit organizations to establish teacher training partnership programs to improve science and mathematics instruction at the elementary and secondary education levels. Requires grantees to partner with one or more local educational agencies in carrying out the program. Requires grantees to undertake activities such as teacher institutes for intensive content instruction, teacher induction programs, and sustained professional development programs, and allows funds to be used to train teacher leaders and to train teachers to use technology and laboratory experiences in the classroom. Establishes that the grant size should be between $75,000 and $2,000,000 per year. Requires the Director to assess the effectiveness of the program in improving elementary and secondary science and mathematics instruction and transmit the results in a report not later than 5 years after the enactment of this section. Authorizes appropriations for the program of $50,000,000 for each of the fiscal years 2007 through 2011.

SEC. 4 SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS TALENT EXPANSION PROGRAM

Authorizes appropriations for the Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP) at NSF of $40,000,000 for fiscal year 2007, $45,000,000 for fiscal year 2008, and $50,000,000 for each of the fiscal years 2009 through 2011. (This program provides grants to institutions of higher education to increase the number of students majoring in STEM fields.)

SEC. 5 INTEGRATIVE GRADUATE EDUCATION AND RESEARCH TRAINEESHIP PROGRAM

Requires that the Director allocate at least 1.5 percent of funds appropriated for Research and Related Activities to the Integrative Graduate Education and Research Traineeship (IGERT) Program. Requires that the Director coordinate with Federal agencies to expand the interdisciplinary nature of the program, and allows the Director to accept funds from those agencies to carry out the program.

SEC. 6 ESTABLISHMENT OF CENTERS FOR UNDERGRADUATE EDUCATION IN SCIENCE, MATHEMATICS, AND ENGINEERING

Establishes a program at NSF to provide grants to departments of science, mathematics, or engineering at institutions of higher education or consortia thereof to establish Centers for Undergraduate Education in Science, Mathematics, and Engineering to improve the quality of undergraduate courses and increase the number of students taking courses in these fields. Requires that grants be made jointly through the Education and Human Resources Directorate and at least one research directorate for periods up to five years, with two possible extensions of no more than three years each. The grants may be used for curriculum development, improving instructional methods, teacher training, and disseminating findings of research in these areas to faculty at the grantee institution and other institutions. Requires that the Director consider the types of activities proposed, the degree to which the grant will affect faculty and students at the grantee institution and other institutions, and a plan for assessing the effectiveness of the activities when assessing grant applications. Authorizes appropriations for the program of $4,000,000 for fiscal year 2007 and $10,000,000 for each of the fiscal years 2008 through 2011.

SEC. 7 EVALUATION OF PROFESSIONAL SCIENCE MASTERS

Requires the Director to arrange for an assessment of the impact of the Professional Science Master's (PSM) degree at a variety of institutions. Requires that the report be submitted to Congress within 3 years of the enactment of the act and include information on the interdisciplinary nature of the degree, the employment and salary prospects of degree recipients relative to traditional science master's graduates, the extent to which PSM graduates continue their education, and the effectiveness of the degree at attracting populations traditionally underrepresented in science, technology, engineering, and math fields.

SEC. 8 REPORT ON BROADER IMPACTS CRITERION

Requires the Director of NSF to submit to Congress within 1 year of the enactment of the act a report that evaluates the effectiveness of the use of the broader impacts criterion by NSF. Requires the report to identify how NSF evaluates proposals based on the broader impacts criterion, categorize the types of broader impacts activities proposed, include any evaluations performed by NSF of the implementation of broader impacts aspects of research proposals, describe which overarching national goals broader impacts criterion is best suited to promote, and describe what steps NSF should take to use the broader impacts criterion to improve undergraduate science, mathematics, and engineering education.

SEC. 9 EDUCATION PROGRAMS AT THE DEPARTMENT OF ENERGY

Authorizes education programs at the Department of Energy in fields related to the Department's mission, including activities such as scholarships or fellowships for study or research, research experiences for undergraduates, and summer institutes for improving teacher content knowledge in science and mathematics. Requires the Secretary of Energy to submit a report not later than 1 year after the enactment of this act that includes an inventory of existing education programs at the Department and the National Laboratories and requires independent evaluations of those programs to be conducted within 4 years of the enactment of this act. Requires the Department to include the results of evaluations of educational programs run by the National Laboratories as a factor when setting performance and incentive fees for National Laboratory management and operations contractors.

SEC. 10. DEFINITION

Defines "Institution of Higher Education."